

**IN THE UNITED STATES DISTRICT COURT
FOR THE WESTERN DISTRICT OF TEXAS
WACO DIVISION**

COMMWORKS SOLUTIONS, LLC

Plaintiff,

v.

COMCAST CABLE COMMUNICATIONS,
LLC and COMCAST CABLE
COMMUNICATIONS MANAGEMENT,
LLC,

Defendants.

Civil Action No.: 6:21-cv-00366-ADA

COMCAST'S REPLY CLAIM CONSTRUCTION BRIEF

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I. “PROVISIONING” / “PROVISIONED” (’249 PATENT, ’285 PATENT, ’664 PATENT)

The Federal Circuit has provided clear guidance in *Monsanto v. Bayer Bioscience B.V.* that similar terms across unrelated patents, such as is the case here for the term “provisioning,” should be individually construed according to each patent’s intrinsic disclosures. 363 F.3d 1235, 1236, 1244-45 (Fed. Cir. 2004). Simply arguing that all the asserted patents broadly relate to computer networking, as Plaintiff did in its responsive brief, does not negate the law. Below, we explain why Comcast’s proposed constructions for “provisioning” are correct when viewed in the context of each patent’s intrinsic disclosure, as required by Federal Circuit law.

’249 Patent: Plaintiff ignores the definition found in the ’249 patent, which states: “[F]or the purpose of the present invention, any change in the configuration, operation, characteristics, properties, etc. of communication resources in a network may be described as a change in network provisioning.” ’249 Pat. at 14:66-15:3. Thus, the noun “provisioning” in the context of the ’249 patent means “configuration, operation, characteristics, or properties of communication resources in a network.” When “provision” is used as a verb in the ’249 Patent, it is used to mean “establish a new circuit or path.” *E.g.*, ’249 Pat. at 14:59-61 (“[T]his [change] may be accomplished by provisioning an additional circuit or path . . .”), 15:61-62 (“[T]he network controller 304 may provision the newly added third virtual circuit 656 . . .”).

’285 Patent: The primary difference between the parties’ proposed constructions for “provisioning” for the ’285 patent is that Comcast proposes that the communication link be authorized. Importantly, Plaintiff never disputes Comcast’s proposed construction for the ’285 patent. Dkt. 27 at 4. Nor could they—even Plaintiff admits that the ’285 patent is about “securely connecting network devices using time-based provisioning methods.” *Id.* at 24. To ensure there is a secure connection between a wireless device and a network access point,

provisioning is limited to authorized devices only. '285 Pat. at 5:21-26.

'664 Patent: The dispute here centers on whether a path being “provisioned” with traffic has to be successfully routed, and whether the act of “identifying” is part of “provisioning.” The specification precisely discloses both aspects of Comcast’s proposal. '664 Pat. at 7:40-45 (“[I]nformation . . . is retrieved . . . *to identify* how the path across the DCS should be provisioned *to route traffic to the appropriate destination.*” (emphases added)). Plaintiff also argues that Comcast’s proposals create linguistic problems when inserted into the claims, but Plaintiff’s proposals are subject to the same criticism. *E.g.* '664 Pat. claim 4 (“A routing manager for [‘establishing connectivity’] paths for network traffic . . .”). This highlights the fallacy of Plaintiff’s one-size-fits-all approach, and the term should be construed as a part of a longer claim phrases in which it appears, as Comcast proposed in its opening brief.

II. TERMS OF THE '249 PATENT

A. “Open System Interconnection (OSI) reference model layers” (claims 11, 31, 38, 48)

Plaintiff does not dispute Comcast’s proposed construction, which is drawn directly from the specification. '249 Pat. at 4:28-64. Plaintiff just wishes to avoid having this term construed by relying on *Yeti Coolers, LLC v. RTIC Coolers, LLC*. But that case was a *Daubert* ruling, so it does not govern when a claim should be construed. *See* 2017 WL 404519 (W.D. Tex. Jan. 27, 2017). Nor should the Court decline to enter Comcast’s proposal simply because the construction contains technological terms; the Court should enter Comcast’s proposal because it clarifies the meaning of this esoteric technical term for the jury.

B. “monitor[ing] at least one OSI reference model layer” (claims 11, 29, 30, 31, 38, 48)

Plaintiff appears to contend that “communication links” are associated with *all* OSI layers, but the specification disproves that argument. '249 Pat. at 9:14-17 (“[T]he

communication links 318 . . . may be categorized, in the resource database 312, *according to their functional layers of the OSI reference model.*” (emphasis added)). Plaintiff’s claim differentiation argument is also wrong because Plaintiff deceptively omits the claim phrase “using a proactive monitoring process” from claim 29, which renders it narrower than claim 11. *Id.* at cl. 29. Finally, Plaintiff is incorrect that the monitoring step may be accomplished by actions other than tracking quality of service events; Plaintiff’s supposedly contrary examples are all actions that the network monitor may perform that are not part of the “monitoring” step.

C. “quality of service event” (claims 11, 15, 17, 18, 19, 31, 32, 41, 48, 49)

Construction is necessary for this term of art, and Plaintiff’s proposal is circular and unhelpful to the jury. Plaintiff’s three criticisms of Comcast’s proposed construction are all misplaced, because Comcast’s construction uses the phrase “such as” to introduce examples of “quality of service events,” thereby clarifying that the list is exemplary and not exhaustive.

D. “signaling that the network provisioning...has been changed” (claims 11, 31, 48, 49)

Plaintiff mischaracterizes its extrinsic evidence, which in fact *supports* Comcast’s proposal. This claim uses the word “signal” as a verb, but Plaintiff cites a dictionary definition of “signal” as a noun. Plaintiff’s dictionaries included a definition of “signal” as a verb, which—consistent with Comcast’s proposal—defined “signal” as “make a signal or signals *to someone.*” Dkt. 27-9 at 7 (emphasis added). Plaintiff’s claim differentiation argument also fails because Comcast’s proposal does not render claim 38 coextensive with any other claim: among other differences, claim 38 is a system claim (unlike claims 11, 31, and 48) and requires a network monitor and controller (unlike claim 49, which has only means-plus-function limitations).

E. “balancing data traffic throughout the network” (claims 32, 33)

Plaintiff does not offer any evidence of a POSITA’s understanding of this term or

rebutting Dr. Jeffay's opinion that this term is indefinite. *See AllVoice Computing PLC v. Nuance Commc'ns, Inc.*, 504 F.3d 1236, 1240 (Fed. Cir. 2007) (indefiniteness analysis requires showing what a POSITA understands). The paper by Benjamin Newton (Dkt. 27-6) does not undermine Dr. Jeffay's opinion because (1) it was written by a student, not Dr. Jeffay; and (2) it describes balancing the load on a single link, not the entire network, and this term is indefinite principally because it requires balancing "throughout the network." Jeffay Decl. (Dkt. 26-26) ¶ 29. The term is further indefinite because the required degree of "balance" is unspecified and uncertain; Plaintiff asserts only that a "perfectly uniform load" *is not* required, but Plaintiff has no evidence or explanation of how a POSITA would understand what *is* required. Dkt. 27 at 6.

Plaintiff's alternate construction should be rejected because it simply repeats the scopeless phrase "throughout the network." Plaintiff's proposal is also overbroad, since Plaintiff's term "adjusting" is broader than the claim's "balancing."

F. "shortest possible path" (claim 33)

Again, Plaintiff has no support for its assertion that a POSITA would understand this term with reasonable certainty and offers no evidence to rebut Dr. Jeffay's opinion. *AllVoice*, 504 F.3d at 1240. The Benjamin Newton paper relied on by Plaintiff illustrates why this term is indefinite, as the very sentence that uses the term "shortest possible path" explains that the relevant metric is "length (in hops)." Dkt. 27-6 at 89. But here, this term is indefinite principally because no metric is specified (either in the '249 patent, or in the extrinsic Dijkstra algorithm that Plaintiff cites), and Plaintiff acknowledges that use of different metrics may result in different paths being "shortest." Dkt. 27 at 11. Plaintiff's analogy to navigating a city further shows that the term is indefinite: a navigation app can find the "shortest" route only after a user selects a metric (such as time or distance) by which "shortest" can be measured.

G. “means for monitoring at least one OSI reference layer functioning in the multi-layered network” (claim 49)

For all ten means-plus-function terms across the six asserted patents, Plaintiff argues that no algorithmic structure is required because the claims use a “special purpose device.” Dkt. 27 at 11-19, 25-31, 33-38. However, the Federal Circuit has repeatedly found that “[w]hen dealing with a ‘*special purpose computer*-implemented means-plus-function limitation,’ we require the specification to *disclose the algorithm for performing the function.*” *Function Media, L.L.C. v. Google, Inc.*, 708 F.3d 1310, 1318 (Fed. Cir. 2013) (emphasis added); *see also TecSec, Inc. v. IBM Corp.*, 731 F.3d 1336, 1348 (Fed. Cir. 2013). This is because a “special purpose computer” is simply a computer programmed to perform a particular function. *Williamson v. Citrix Online, LLC*, 792 F.3d 1339, 1352 (Fed. Cir. 2015). It is precisely for computers programmed to perform a particular function that the specification must disclose an algorithm. *Id.* at 1352; *Noah Sys., Inc. v. Intuit Inc.*, 675 F.3d 1302, 1318 (Fed. Cir. 2012) (“This court imposed the algorithm requirement to prevent purely functional claiming when a patentee employs a special purpose computer-implemented means-plus-function limitation.”). The patents reveal that Plaintiff’s alleged structural components, such as the “network monitor” and “network controller,” are generic off-the-shelf servers that perform these functions only with proper software programmed. *E.g.*, ’249 Pat. at 7:32-35, 8:49-51 (“network monitor” and “network controller” may be a Netra t1 server); *see* Reply Decl. of Eugene Mar (“Mar Decl.”) Ex. 1 (Netra t1 lacks these functions absent installation of other software). Thus, the specification must disclose an algorithm.

Plaintiff’s case—*Nevro Corp. v. Boston Scientific Corp.*, 955 F.3d 35 (Fed. Cir. 2020)—is inapplicable, as the *Nevro* patent covered a medical device, not software-implemented computer technology as here. The claimed function in *Nevro* was “generat[ing] a therapy signal having a frequency of 10 kHz, an amplitude up to 6 mA, [and pulses] between 30 microseconds

and 35 microseconds,” and the structure was a “signal generator” implanted near the patient’s spinal cord. *Id.* at 38. The district court *sua sponte* held that this term was indefinite because it was susceptible to differing constructions. *Id.* at 40-41. The Federal Circuit reversed, concluding that “susceptible to differing constructions” is “the wrong legal standard.” *Id.* at 41. Because *Nevro* dealt with a separate issue and a different technology, it has no relevance here.

Turning to the required algorithm, Comcast’s proposal says only that one of the reactive or proactive monitoring processes is necessary, not that a combination is prohibited as Plaintiff wrongly alleges. However, should the Court conclude that Comcast’s proposed construction is ambiguous on this point, the Court may choose to replace the word “one” in Comcast’s construction with the phrase “at least one.” In any event, the Court should not adopt Plaintiff’s proposal, because Plaintiff failed to explain how its various cited passages disclose an algorithm that is clearly linked to the recited function. *See Default Proof Credit Card Sys., Inc. v. Home Depot U.S.A., Inc.*, 412 F.3d 1291, 1298 (Fed. Cir. 2005).

H. “means for determining that a quality of service event has occurred in the multi-layered network” (claim 49)

As described for the “means for monitoring . . .” term, Plaintiff is incorrect that the specification need not disclose an algorithm. *Supra* at 5-6. As to the required algorithm, Plaintiff offers no evidence to rebut Dr. Jeffay’s indefiniteness opinion. *AllVoice*, 504 F.3d at 1240. Instead, these passages discuss monitoring communication resources, metrics that may be monitored, and *the fact* that the claimed determination may be made (with no algorithm showing *how* the determination is made). *See* Jeffay Decl. (Dkt. 26-26) ¶¶ 46-50. Plaintiff’s citation to a patent issued to Dr. Jeffay is irrelevant because (1) Dr. Jeffay did not draft the patent and was one of four inventors; (2) the patent does not disclose or claim the function of determining whether a quality of service event occurred; and (3) the fact that an algorithm may be well

known in the art does not relieve an applicant of the obligation to disclose an algorithm in the specification. *Blackboard, Inc. v. Desire2Learn, Inc.*, 574 F.3d 1371, 1385 (Fed. Cir. 2009).

I. “means for determining that the quality of service event occurred at a layer N in the OSI Reference Model” (claim 49)

As described for the “means for monitoring . . .” term, Plaintiff is incorrect that the specification need not disclose an algorithm. *Supra* at 5-6. As to the required algorithm, Dr. Jeffay’s indefiniteness opinion addresses the precise paragraph that Plaintiff block quotes and explains that although the passage says that “resource database **312**” is used in making the determination, a POSITA would not understand these disclosures to teach an algorithm, process, or series of steps for performing the recited function. Jeffay Decl. (Dkt. 26-26) ¶ 55.

J. “means for responding to the quality of service event in the multi-layered network by changing network provisioning at a layer less than N” (claim 49)

As described for the “means for monitoring . . .” term, Plaintiff is incorrect that the specification need not disclose an algorithm. *Supra* at 5-6. As to the required algorithm, Plaintiff appears to agree with Comcast’s algorithm but then argues that additional algorithms should be included in the structure because the specification teaches “various provisioning methods using MPLS or activating additional virtual circuits.” Dkt. 27 at 18. Comcast’s proposal and unrebutted expert testimony identifies what a POSITA understands to be the algorithm for this function, and Plaintiff’s proposal (which spans more than four columns) includes content that has no relation to the claimed function. Jeffay Decl. (Dkt. 26-26) ¶ 62.

K. “means for signaling that the network provisioning at the layer less than N has been changed” (claim 49)

As described for the “means for monitoring . . .” term, Plaintiff is incorrect that the specification need not disclose an algorithm. *Supra* at 5-6. As to the required algorithm, Plaintiff’s citations state only that a network controller is involved. Jeffay Decl. (Dkt. 26-26) ¶¶

67-70. That cannot be a sufficient structure, as Plaintiff acknowledges that the “network controller” is a piece of hardware, not an algorithm or process. Dkt. 27 at 19; *see also supra* at 5-6 (network controller needs to be programmed to perform this functionality). And it is irrelevant whether an algorithm for this function was known in the art because the inquiry under § 112 ¶ 6 asks “whether the specification contains a sufficiently precise description of the ‘corresponding structure’ . . . , not whether a person of skill in the art could devise some means to carry out the recited function.” *Blackboard, Inc.*, 574 F.3d at 1385.

III. TERMS OF THE ’465 PATENT

A. “identifying a received frame as a priority frame in case said extracted bit pattern matches with said search pattern” (claims 1, 6, 7)

Plaintiff argues that Comcast’s proposed construction excludes certain embodiments, but Plaintiff’s examples are either entirely consistent with Comcast’s proposed construction, or improperly seek to import limitations from unasserted dependent claims into the claims at issue.

Plaintiff’s first and third arguments, which refer to a plurality of information elements and configuration data used to distinguish different priority levels, actually *support* Comcast’s construction. Dkt. 27 at 20-21. Where there is a plurality of “information elements” (defined to include at least the offset and the search pattern [’465 Pat. at 3:5-6]), the ’465 patent explains that “for each information element it is checked whether a bit pattern at the offset included in the information element matches with the search pattern included in the information element.” ’465 Pat. at 8:20-23. Thus, Comcast’s construction captures how a data frame is identified as a priority frame, even when there are multiple “information elements.” Nor does Comcast’s proposal exclude running a match across multiple “information elements.” Comcast’s construction clarifies that a priority data frame is identified based only on extracted bit patterns identically matching search patterns.

Plaintiff's only other argument refers to an embodiment where the bit pattern is masked and then compared to a search pattern. Dkt. 27 at 21. However, that embodiment comes from claim 3, which states that the masked pattern is compared to the search pattern "instead of comparing said bit pattern with said search pattern." Thus, this "masking" embodiment is an alternative to claims 1, 6, and 7—not a narrower subset of them. *See GE Lighting Sols., LLC v. AgiLight, Inc.*, 750 F.3d 1304, 1310 (Fed. Cir. 2014) ("The district court also erred by importing limitations from the dependent claims of the '140 patent into the independent claims.").

B. "priority frame" (claims 1, 6, 7)

Plaintiff's argument that a "priority frame" need not have higher priority than other data frames contradicts the intrinsic evidence. Dkt. 27 at 22-23. The '465 patent states: "[T]he above embodiments [the entire specification] it was basically distinguished between priority frames and normal frames, *i.e.*, between frames with priority and frames without priority." '465 Pat. at 12:12-15. While Plaintiff argues that priority frames can be sent to a normal queue, that is beside the point. When a high priority queue is available, the priority data frames are sent there to be transmitted faster than normal traffic. *Id.* at 3:49-53. When a high priority queue is not available, priority frames are counted so that the duration for sending high priority traffic can be adjusted to accommodate the number of priority frames. *Id.* at 9:9-41 (priority frames are counted when the high priority queue is unavailable); 9:41-58 (contention free period [CFP] is adjusted to accommodate the number of priority frames). In sum, the entire purpose of the '465 Patent is to identify priority frames so that they can be transmitted at a higher rate than normal traffic. *Id.* at 2:9-24; 2:51-60.

C. "offset" (claims 1, 6)

The parties dispute whether the offset must be calculated from the start of the data frame. Plaintiff suggests there could be multiple offsets measured from different starting points (Dkt. 27

at 23), which shows that, absent a construction, the jury will not know what an offset refers to and how it identifies the predetermined position where the bit pattern can be extracted (as claim 1 requires). *See AFG Indus., Inc. v. Cardinal IG Co.*, 239 F.3d 1239, 1247 (Fed. Cir. 2001) (“It is critical for trial courts to set forth an express construction of the material claim terms in dispute, in part because the claim construction becomes the basis of the jury instructions”).

Plaintiff’s argument is also irrelevant because it relies on the embodiment from claim 18, which refers to a process for ***generating priority information*** by identifying and locating search patterns and then storing that information in the data frame, whereas claims 1 and 6 refer to detecting the priority of a data frame. ’465 Pat. at 11:11-38 (Plaintiff’s cited embodiment is an “example” of the configuration program used to generate priority information). In Plaintiff’s embodiment, the offset is used to calculate the position of the search pattern. *Id.* at 11:26-38 (“search pattern is the IP-address in question” and the “configuration program knows that the offset to the destination IP-address”). In contrast, claim 1 states that the offset is used to define the ***predetermined position of the bit pattern***, which as the intrinsic evidence cited in Comcast’s opening brief demonstrates, is calculated from the beginning of the data frame.

D. “high priority queue” (claim 7)

Plaintiff’s attempt to disprove that a “high priority queue” is reserved exclusively for high priority frames is illogical. Plaintiff’s citation merely establishes that a high priority queue may be unavailable, in which case high priority traffic is funneled to a normal queue. ’465 Pat. at 6:57-61. Plaintiff provides no evidence that, if a high priority queue is available, any normal priority traffic is funneled to that queue. Absent such evidence, as explained in Comcast’s opening brief, a “high priority queue” must be reserved exclusively for high priority frames.

IV. TERMS OF THE '285 PATENT

A. “tracking an operating parameter of the wireless device within a service area” (claims 1, 22, 43)

The dispute centers on whether the claims require, as a part of the tracking, to include the noting of the time when an operating parameter occurred. Plaintiff’s argument that there is a single embodiment that tracks the repeated power on attempts but does not require the noting of time (Dkt. 27 at 25) is belied by the intrinsic evidence. For example, Plaintiff failed to inform the Court that this embodiment (found at 8:21-25) is disclosed under the heading “Alternate Applications for the *Time-Based* Access Provisioning System.” ’285 Pat. at 8:14-15 (emphasis added). And the paragraph preceding the passage chosen by Plaintiff refers to the access provisioning system as being *time-based* two more times. *Id.* at 8:16-20. The “alternate application” for time-based access provisioning refers to tracking *repeated* power on attempts by a wireless device, as opposed to a “single power on” attempt. *Id.* at 8:21-25. This embodiment does not negate that the claimed invention is a time-based access provisioning system.

For Plaintiff’s second argument, Plaintiff resorts to describing a hypothetical embodiment where allegedly all the tracked operating parameters occurred during a time interval. Dkt. 27 at 25. Plaintiff does not cite any intrinsic evidence that discloses this hypothetical embodiment. Instead, as detailed in Comcast’s opening motion, every embodiment described in the specifications discloses noting the time by which a tracked operating parameter occurs.

B. “[logic for] initiating [provisioning/an association] of the wireless device if the tracked operating parameter occurs within a time interval” (claims 1, 22, 43)

1. “initiating provisioning of the wireless device if the tracked operating parameter occurs within a time interval” from claim 1 is a step-plus-function limitation.

While the parties agree that this claim limitation, as phrased in claims 22 and 43, is a means-plus-function term subject to 35 U.S.C. § 112 ¶ 6, Plaintiff now claims that this phrase

without the opening stanza “logic for” should not be given the same treatment. Controlling Federal Circuit precedent dictates that it should, as the Federal Circuit has explained that a process claim that recites “steps for,” as claim 1 does, is a step-plus-function limitation subject to the § 112 ¶ 6 requirements where the limitation contains no acts. *Masco Corp. v. U.S.*, 303 F.3d 1316, 1327-28 (Fed. Cir. 2002). “The term ‘acts’ [] refer[s] to the implementation of such steps.” *O.I. Corp. v. Tekmar Co.*, 115 F.3d 1576, 1583 (Fed. Cir. 1997). Judge Rader has previously explained the distinction between “function” and “acts” as follows:

[T]he “*underlying function*” of a method claim element corresponds to what that element ultimately accomplishes in relationship to what the other elements of the claim and the claim as a whole accomplish. “Acts,” on the other hand, correspond to how the function is accomplished.

Seal-Flex, Inc. v. Athletic Track and Court Const., 172 F.3d 836, 849-50 (Fed. Cir. 1999) (Rader, J. concurrence) (emphasis in original). If a claim limitation recited in the “step for” format does not describe an act, then the claim limitation should be treated as a step-plus-function limitation subject to § 112(6) requirements. *Masco*, 303 F.3d at 1327-28; *O.I.*, 115 F.3d at 1583.

Claim 1’s limitation of “initiating provisioning . . .” is entirely functional and does not recite an act. This claim is directed to “a process for provisioning between a wireless device and a network.” ’285 Pat. at cl. 1. The limitation “initiating provisioning of the wireless device . . .” merely repeats the function recited in the preamble—*i.e.*, provisioning between a wireless device and a network. The limitation adds a condition as to **when** provisioning should occur, but it does not add any information on **how** the provisioning is implemented. A contemporaneous dictionary confirms that “provisioning and initiation are synonymous,” so these two words plus the condition as to when provisioning occurs fails to show **how** provisioning is initiated. *See* Mar Decl. Ex. 2 at 632. Thus, the phrase “initiating provisioning . . . if the tracked operating parameter occurs within a time interval” is a step-plus-function limitation subject to § 112(6).

2. Plaintiff's Proposed Construction for Claims 1, 22, and 43 Fails to Identify any Algorithm for the Claimed Function.

As discussed above (*supra* at 5-6), functions that are implemented using software require the disclosure of an algorithm to satisfy § 112 ¶ 6. Plaintiff fails to identify a single algorithm for “initiating provisioning.” Dkt. 27 at 26-29. The closest Plaintiff comes is to point at Figures 3 and 4; however, even Plaintiff admits that these figures merely “culminate in the ‘initiate provisioning’ steps.” *Id.* at 28. All the steps in Figures 3 and 4 that precede the initiate provisioning step 64 pertain to tracking operating parameters (a separate claim limitation) and time-based qualifying of wireless devices. ’285 Pat. at Figs. 3 & 4. Thus, none of the other steps depicted in Figures 3 and 4 shed any light on the literal black box that is used to illustrate the “initiate provisioning” step. *See* Dkt. 26 at 27-28 and Dkt. 26-27 [Lanning Decl.] at ¶¶ 31-35.

Plaintiff emphasizes how the claimed invention determines when a tracked operating parameter occurred within a time interval, but that is not the claimed function. Plaintiff even admits that the “timing charts” it cites from Figures 5 and 6 pertain to the phrase “if the tracked operating parameter occurs within a time interval,” which is not the claimed function. Dkt. 27 at 29. As explained above, this portion of the claim explains only *when* provisioning is to be initiated, which is insufficient because it does not describe *how* the function is performed. *See Aristocrat Techs. Australia Pty Ltd. v. Int’l Game Tech.*, 521 F.3d 1328, 1334 (Fed. Cir. 2008) (plaintiff’s proposed “mathematical expression that describes the outcome of performing the function” was flawed because it did not show “how the function is performed”). Even if Plaintiff’s proposed structure discloses a portion of the algorithm for initiating provisioning, that is equivalent to no disclosure at all: “[W]here a disclosed algorithm supports some, but not all, of the functions associated with a means-plus-function limitation, we treat the specification as if no algorithm has been disclosed at all.” *Noah*, 675 F.3d at 1318.

Finally, even if no algorithm were required, Plaintiff's proposed structure fails because the specification does not disclose any of Plaintiff's structural elements, such as the time-based provisioning logic¹, access control list, activation button, and wired network logic, as performing the step of initiating provisioning. The disclosed structure must perform the entire function, yet none of Plaintiff's evidence suggests that these structural elements perform the step of initiating provisioning. *See* Dkt. 27 at 26-29. In fact, Plaintiff's description of the roles of the "transceiver," "wired network logic," and "wired network connection" is entirely based on attorney argument without a single citation to intrinsic evidence. *Id.* at 28. Similarly, Plaintiff has no evidence for its assertion that one of ordinary skill would understand this phrase with reasonable certainty, meaning that argument fails as well. *See AllVoice*, 504 F.3d at 1240.

C. "time interval" (claims 1, 4, 13, 14, 22, 25, 34, 35, 43, 46, 54, 55)

Plaintiff disputes that a "time interval" refers to an acceptance time interval, but that argument ignores the claim language, which provides that the system will initiate provisioning if a tracked parameter "occurs within a time interval." '285 Pat. at cls. 1, 22, 43. Comcast's opening brief, which did not concede that this term just means an "interval of time," detailed the intrinsic evidence showing that provisioning is initiated if the tracked operating parameter occurs ***within a specific time period***. Dkt. 26 at 28-29. Once viewed through the context of the claim language, Plaintiff's citations actually support Comcast's construction. For example, Plaintiff argues that Figure 5 references three different "time intervals," but in fact only the acceptance time interval (74) matches the claim language. The other two intervals are the intervals for the first and second wireless devices (76 and 80). '285 Pat. at 6:4-21. The interval for the first

¹ Plaintiff argues that "provisioning logic" and "wired network logic" are part of the claimed structure, but does not identify what is the "logic" used in programming. Thus, even Plaintiff's structure relies on algorithms, but Plaintiff fails to identify what those algorithms are.

device (76) (in this example, the tracked parameter) falls within the acceptance time interval of 5 minutes (74), and provisioning is initiated. *Id.* at 6:4-11. The interval for the second device (80) falls outside the acceptance time interval (74), and provisioning is denied. *Id.* at 6:11-21. Thus, this example shows that the claim term must refer to the acceptance time interval.

Under Plaintiff’s argument, these claims are indefinite because a POSITA would not understand when provisioning would be initiated, since there is no reasonably certain way to tell whether a tracked parameter occurred within an unbounded time interval. *See Berkheimer v. HP*, 881 F.3d 1360, 1364 (Fed. Cir. 2018) (finding the term “minimal redundancy” indefinite because the specification had no comparison for determining what constituted “minimal” when the patent disclosed several redundancies). This is in contrast to Plaintiff’s case (*BASF v. Johnson Matthey*, 875 F.3d 1360, 1367 (Fed. Cir. 2017)), where the court rejected an indefiniteness argument because there were a limitless number of materials for catalyzing a particular compound.

D. “means for tracking an operating parameter of [a] wireless device” (claims 22, 43)

As discussed above (*supra* at 5-6), functions that are implemented using software require the disclosure of an algorithm to satisfy § 112 ¶ 6. As with the term “[logic for] initiating provisioning...,” Plaintiff includes several forms of logic as part of the claimed structure, but Plaintiff does not disclose what steps constitute the “provisioning logic” or “wired network logic.” Conversely, Comcast’s proposed construction identifies the algorithm that is most clearly linked to the claimed function of “tracking an operating parameter of a wireless device.”

V. TERMS OF THE ’664 PATENT

A. “digital cross connect [system]” (claims 1, 3, 4, 6, 7, 9, 13)

Plaintiff mischaracterizes the prosecution history in two ways. *First*, the amendment that advanced the claims to allowance explicitly recited a “digital cross connect,” so this limitation

was needed to overcome the prior art rejections. Dkt. 26-18 at 2 (claim amendment reciting “a cross connection status database . . . wherein the status indicates whether a cross-connection ***using said digital cross connect*** was successfully provisioned” (emphasis added)); Dkt. 26-19 at 2 (Notice of Allowance); *see also* Dkt. 26 at 32-33 (describing prosecution history in detail).

Second, the prior art cited during prosecution (Lu) disclosed a device that interconnects networks (*i.e.* Plaintiff’s proposal for this term). The applicant acknowledged as much by stating that Lu taught (in the applicant’s own words) “crossing network boundaries.” Dkt. 26-17 at 7. Plaintiff argues, without any explanation, that this does not mean that Lu taught “interconnecting networks” (Dkt. 27 at 33), but the prosecution history confirms Comcast’s characterization. For example, original dependent claims 3 and 6 recited “wherein said at least a first network element is in a first network and said at least a second network element is in a second network”; the examiner rejected these claims multiple times as anticipated by Lu (Dkt. 26-14 at 7; Dkt. 26-15 at 4). The applicant never argued that Lu failed to teach these first and second networks or an interconnection between them (*see* Mar Decl. Ex. 3 at 7-10; Dkt. 26-17 at 7-10); *see also id.* Ex 4 at Figs. 2, 4 (figures from Lu showing “shared network nodes” interconnecting multiple networks). Thus, Plaintiff’s proposal is foreclosed by the prosecution history, as it contradicts the applicant’s statements to the Examiner about Lu not disclosing a “digital cross connect.”

Plaintiff’s remaining arguments are unpersuasive as well. Rather than read an embodiment into the claim, Comcast’s proposed construction tracks the express definition in the specification nearly verbatim, as shown in the table in Comcast’s opening brief (Dkt. 26 at 33). This express definition is also consistent with the Examiner’s understanding. Dkt. 26-20 at 5 (“[T]he original specification simply defines the well-known DCS to any device that interconnects networks to facilitate traffic routing from one network to another . . . using

different protocol or rate.” (*ellipses in original*)); *id.* at 11 (Examiner reiterates this statement). In contrast, Plaintiff’s construction uses only four words from the definition and *ignores the remaining thirty words of the definition*. Nor does Comcast’s construction improperly exclude from claim scope the situation where the interconnected networks use the same protocol or traffic rate. Rather, all of the claims require a “digital cross connect,” which are used where “the different networks rely on *different protocols* [or] operate at *different speeds*.” ’664 Pat. at 5:16-18 (emphases added); *see also id.* at 5:25-27 (“DCSs are very well known in the art and serve to efficiently manage disparate traffic protocols and line speeds”). Finally, Comcast’s inclusion of the phrase “digital cross connect” in its proposed construction for the term “whether a cross connection using said digital cross connect was successfully provisioned” is not a concession that the term requires no construction. Consistent with common practice,² Comcast’s proposed construction is intended to apply wherever the term “digital cross connect” appears (including in the construction of other terms).

B. “means for creating a graph of routing nodes and links” (claim 4)

Plaintiff is incorrect that the “network management system comprising a routing manager and inventory database” is a sufficient structure. *See supra* at 5-6 (collecting Federal Circuit cases holding that an algorithm is required for limitations such as this). Indeed, the “routing manager” that Plaintiff cites is equivalent to terms that the Federal Circuit has found to be insufficient structures absent an algorithm. *E.g., Blackboard*, 574 F.3d at 1382-83 (absent disclosure of algorithm, computer-implemented “access control manager” was insufficient structure for “means for allowing access . . .” function). As to the required algorithm, Dr.

² *E.g. Appliance Computing III, Inc. v. Redfin Corp.*, 6:20-cv-00376, Dkt. 77 (W.D. Tex. Sept. 30, 2021) (claim construction order from this Court including the verb “rendering” in several constructions, where the verb “render” was separately construed).

Jeffay’s opinion addresses the precise paragraph that Plaintiff block quotes; he explains that this paragraph describes how the routing tables are updated, but that the paragraph does not explain how the topology of the graph of routing nodes and links is actually created in the first instance. Jeffay Decl. (Dkt. 26-26) ¶ 79. Plaintiff offers no criticisms of Dr. Jeffay’s reasoning as to this term or any contrary evidence as to how a POSITA would understand the patent’s disclosures.

C. “means for modeling said at least a first digital cross connect system as a link between those routing nodes representing said first network element and said second network element” (claim 4)

As described for the “means for creating a graph . . .” term, Plaintiff is incorrect that the specification need not disclose an algorithm. *Supra* at 5-6. As to the required algorithm, Dr. Jeffay addresses the passage on which Plaintiff relies and explains that a POSITA would not understand the passage to disclose an algorithm for the claimed function:

With respect to the ’664 patent itself, Plaintiff cites only 7:24-45. As relevant to this claimed function, this passage states only that the digital cross connects will be “treat[ed]” as links (7:27) or “updated as links in the routing link table” (7:36). The passage does not provide an algorithm or other series of steps for how the digital cross connects are to be modeled as links between routing nodes, which is what this claimed function requires.

Jeffay Decl. (Dkt. 26-26) ¶ 84. Plaintiff offers no criticisms of Dr. Jeffay’s reasoning as to this term or any contrary evidence as to how a POSITA would understand these disclosures.

D. “means for storing a status of each of said interconnections” (claim 4)

As described for the “means for creating a graph . . .” term, Plaintiff is incorrect that the specification need not disclose an algorithm. *Supra* at 5-6. As to the required algorithm, Plaintiff’s only criticism of Comcast’s proposal is that—in addition to the “cross connection status database . . .” identified by Comcast—the “network configuration management system” can also perform this function. Dkt. 27 at 38. However, Plaintiff is wrong: none of the passages cited by Plaintiff suggests that anything other than the “cross connection status database”

performs this function. Jeffay Decl. (Dkt. 26-26) ¶ 95.

E. “whether a cross-connection using said digital cross connect [system] was successfully provisioned” (claim 49)

Comcast’s proposal tracks the sentence from the specification that explains what it means for a cross-connection to be successfully provisioned, with the exception that Comcast’s construction is phrased in the past tense. Plaintiff criticizes Comcast’s construction because of its use of the past tense (Dkt. 27 at 38), but that criticism is misplaced. The claim (like Comcast’s proposal) is phrased in the past tense (“a cross-connection . . . *was successfully provisioned*”), whereas the specification’s disclosure is phrased in the future tense (“path across the DCS *should be provisioned* to route the traffic to the appropriate destination,” ’664 Pat. at 7:40-45), so Comcast’s proposal appropriately matches the phrasing of the claim itself.

VI. TERMS OF THE ’846 PATENT

A. “transport address” (claims 1, 4, 5, 6, 7, 8)

The parties agree that the “transport address” is the “care-of address,” which is an “IP address associated with a mobile node while the subscriber is visiting a particular foreign link.” ’846 Pat. at 1:22-24, 3:32-34; Dkt. 27 at 39. But Plaintiff seeks to expand the meaning to include the static home address even though the specification explicitly states that the transport address “is *not the static home address* but rather is the Care-of Address” ’846 Pat. at 5:16-18. This clear disclaimer is not limited to one embodiment, as Plaintiff suggests, but is stated in connection with an “option” for protecting the “transport address,” which does not change depending on how it is protected. *Id.* at 4:34-36. None of the options, and nothing in the specification, suggests that the “transport address” (*i.e.*, care-of address) can be the static home address. To the contrary, the patent repeatedly distinguishes the care-of address from the home address. *Id.* at 3:30-33, 3:40-41, 3:49-51, 6:1-4. Plaintiff’s proposal ignores this distinction and

reads the word “transport” out of the term “transport address,” because Plaintiff would define it to mean any “address” whether at home or roaming. *See Stumbo v. Eastman Outdoors*, 508 F.3d 1358, 1362 (Fed. Cir. 2007) (denouncing claim constructions that render terms superfluous).

B. “home subscription server (HSS)” (claim 2)

Comcast’s proposal applies the definition from the industry standard incorporated by reference in the ’846 Patent: “The Home Subscriber Server (HSS) is the master database for a given user. It is the entity containing the subscription related information to support the network entities actually handling calls/sessions.” Dkt. 26-22 at 15. Plaintiff seeks to add a further limitation that the HSS must support “IP Multimedia Subsystem (IMS)” network entities, but that phrase does not appear in the intrinsic record. First, Plaintiff cites a figure in the patent that refers to “Multimedia IP Networks”—a different term than the one it seeks to insert and a box that is not connected to the HSS in the figure. Dkt. 27 at 41. Next, Plaintiff refers to terms from the standard other than the one it seeks to add. *Id.* at 42. Contrary to Plaintiff’s suggestion, the standard does not include the term “IP Multimedia Subsystem” or “IMS.” Dkt. 26-22.

Plaintiff’s only answer is to assert without evidence that the standards body used different terms that Plaintiff thinks actually meant what Plaintiff now proposes. Dkt. 26 at 42, n.4. The standard provides the definition, and Comcast’s proposal uses it to explain this technical term to the jury. Finally, Plaintiff’s citation to one extrinsic website specific to one third-party product from Oracle (*id.* at 42) does not warrant adopting Plaintiff’s proposal, where Comcast’s proposal comes directly from the industry standard incorporated into the patent (*i.e.*, intrinsic evidence).

C. “serving-call state control function (S-CSCF)” (claim 3)

Again, Plaintiff proposes limiting this term by inserting a reference to “the IP Multimedia Subsystem (IMS)” that appears nowhere in the patent or incorporated industry standard. Plaintiff cites *no intrinsic evidence* to support its proposal. Dkt. 27 at 43-44. Instead, Plaintiff cites two

unattributed and undated webpages and a book that post-dates the patent by more than 10 years. Dkt. 27-1, Exs. 14-16. In contrast, Comcast’s proposal is based on the incorporated industry standard (*i.e.*, intrinsic evidence) and will help the jury understand this technical term.

VII. TERMS OF THE ’883 PATENT

A. “telephone network” (claims 1, 6)

Claim terms have their ordinary meaning *unless* the inventor acts as a lexicographer. *Phillips v. AWH Corp.*, 415 F.3d 1303, 1316 (Fed. Cir. 2005) (“[T]he inventor’s lexicography governs.”). It would be error to leave the construction of this defined term to the jury as Plaintiff proposes, while Comcast’s proposal is based on the inventor’s lexicography. And Plaintiff is wrong that this lexicography does not apply: that argument is based on a different term (“Data Network”) and different embodiment (one with a single network instead of two as claimed here).

B. “add[ing] the collaboration session to the [existing/chosen] telephone call” (claims 1, 6, 8)

Both parties suggest that the term should be understood based on its plain meaning but understand it in different ways, which means there is a dispute that must be resolved by the Court—not the jury. *O2 Micro Intern. Ltd. v. Beyond Innovation Tech. Co.*, 521 F.3d 1351, 1361-62 (Fed. Cir. 2008). Comcast proposes that “adding” a collaboration session “to the existing telephone call” means there will be (1) the existing telephone call; and (2) the added collaboration session. This proposal is based on the plain meaning of the word “adding” and is supported by the specification, which discloses adding a separate collaboration session to an existing telephone call. ’883 Pat. at 3:6-10, 3:60-64, 4:32-35, 5:55-67, Figs. 1-2. There is no disclosure of a telephone call being converted to a collaboration session, so Plaintiff’s understanding has no intrinsic support.

VIII. CONCLUSION

The Court should adopt Comcast’s proposed constructions and reject Plaintiff’s proposals.

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CERTIFICATE OF SERVICE

I hereby certify that on November 19, 2021, all counsel of record who are deemed to have consented to electronic service are being served with a copy of this document via the Court's CM/ECF system.

/s/ Timothy Horgan-Kobelski

Timothy P. Horgan-Kobelski